IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Takahiro Yamaguchi et al.

Application No.: 10/776,926	Confirmation No.: 2381
Filed: February 11, 2004	Art Unit: 2611
For: MEASURING APPARATUS AND MEASURING METHOD	Examiner: E. Bayard

MS: AFTER FINAL
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Claims 1-53 are pending in this application. Claims 1, 25, 33, 36-40, and 52-53 are

independent. Claims 1 and 19-20 stand rejected under 35 U.S.C. 102(e) as being anticipated by

U.S. Patent No. 6,671,863 ("Gauthier"). Claims 25-28, 37, and 38 stand rejected under 35

U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,835,501 ("Dalmia"). Claims 2-3, 4-15,

21-24, 36, and 53 stand rejected under 35 U.S.C. 103(a) as being obvious over Gauthier in view

of U.S. Patent No. 6,573,940 ("Yang"), U.S. Patent No. 6,782,404 ("Choudhary"), or U.S. Patent

Application Publication No. 2003/0063701 ("Eubanks"). Applicant traverses all of the rejections

for the reasons set forth below.

A.   The Examiner erroneously interprets the term, "jitter transfer function," of the claims

Applicant respectfully asserts that the Examiner erroneously interprets the term, "jitter

transfer function," recited in the claims.

The Examiner alleges that "the output jitter divided by the input jitter or the input to output transfer characteristic of a PLL is known as 'jitter transfer function'" and that "[t]his transfer function has a 'low pass' characteristics and it is generally desirable to make the cut off frequency as low as possible," relying on that Gauthier, Dalmia, Yang, and Choudhary discloses a PLL (*see* Office Action dated December 20, 2007, at pages 12-14).

However, Applicant respectfully asserts that the term, "jitter transfer function," must be construed to mean that a ratio of an output signal jitter of a device to an input signal jitter of the device. In fact, as disclosed in "ITU-T Recommendation G.958," *which is also cited in paragraph [0005] of the publication of the Specification*, it is known to *one skilled in the art* that the jitter transferring function of a device is defined to be the ratio of the output signal jitter of the device to the input signal jitter of the device (*see,* ITU-T Recommendation G.958, at page 13). Applicant notes that the jitter transfer function of a device is a property that is different from the transfer function of the device in that the former is phase noise that may vary with circuit characteristics and environments, but the latter is a performance characteristic that is defined for a device. Furthermore, Applicant respectfully notes that the above Examiner's interpretation is not supported, and the statements are, therefore, without legal basis. *See In re Ahlert*, 424 F.2d 1088, 1091 (CCPA 1970).

The MPEP 2111.01 makes it clear that "the words of the claim must be given their plain meaning" and that "[t]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art." Also, it is well settled that "[w]e cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must look at the ordinary

meaning in the context of the written description." *See Medrad, Inc, v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005).

Accordingly, the Examiner's proposed interpretation of the claims are not *reasonable*, and, thus, withdrawal of all of the above rejections is respectfully requested.

B.   Gauthier fails to show or suggest all the limitations of claim 1

Independent claim 1 requires, in part, "a timing jitter estimator operable to calculate *an output timing jitter sequence* of an output signal. . ." and "a jitter transfer function estimator operable to calculate a *jitter transfer function* of the electronic device based on *the output timing jitter sequence*." Applicant respectfully asserts that Gauthier fails to show or suggest at least the above limitations.

In fact, Gauthier only mentions the relationships between output clock jitter and power supply noise, but does not suggest any specific method to obtain the jitter characteristic of the PLL (*see* Figures 6-8 and the accompanying text). That is, there can be many ways for measuring the jitter characteristic of a circuit, and Gauthier does not suggest any particular method for calculating a jitter value. This is because the objective of Gauthier is only to propose a model for reducing jitter values by changing loop bandwidth regardless of how the jitter values were obtained. Further, it is noted that Figure 5B of Gauthier merely shows the transfer functions of the PLL circuit components in Laplace transform. As discussed above, the transfer function is different from the jitter transfer function because the transfer function is well-defined for each circuit component as can be seen in Figure 5B of Gauthier. Thus, Applicant believes that it is clear that Gauthier is completely silent with respect to the above limitations of claim 1.

In view of the above, Gauthier fails to show or suggest all limitations of independent claim 1. Thus, claim 1 is patentable over Gauthier. Dependent claims are allowable for at least the same reasons.

C.   Dalmia fails to show or suggest all the limitations of independent claims 25 and 37

Independent claims 25 and 37 require, in part, estimating the bit error rate of the electronic device based on a gain of a *jitter transfer function* of the electronic device. Applicant respectfully asserts that Dalmia fails to show or suggest at least the above limitation.

Dalmia shows conventional bit error rate tester, which measures a bit error rate by comparing measured input data with expected data. Also, Dalmia shows measuring a bit error rate or jitter tolerance using a clock signal having a known amount of jitter, and further shows that the amount of the jitter applied to the clock signal is estimated by calculating the gain of the VCO. However, as explained above, the jitter transfer function is defined as the ratio of output jitter to input jitter, and Dalmia is completely silent as to the ratio of input and output jitter. Therefore, Dalmia does not show or suggest at least the above limitations.

In view of the above, Dalmia fails to show or suggest all limitations of independent claims 25 and 37. Thus, independent claims 25 and 37 are patentable over Dalmia. Dependent claims are allowable for at least the same reasons.

D.   Gauthier, Yang, Choudhary, Eubanks fails to show or suggest the claimed invention

As discussed above, Gauthier fails to show or suggest at least the above limitations of claim 1. Yang, Choudhary, and Eubanks does not teach that which Gauthier lacks. This is

evidenced by the fact that Yang is only relied upon for teaching an instantaneous phase noise estimator and re-sampler. Choudhary is only relied upon for teaching a plurality of input signals having different jitter amounts. Eubanks is only relied upon for teaching estimating an output instantaneous phase noise.
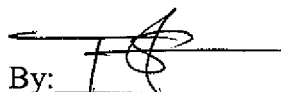
In view of the above, Gauthier, Yang, Choudhary, and Eubanks, whether considered separately or in combination, fail to show or suggest all limitations of independent claim 1. In view of the similarity between the limitations of claims 1 and 53, the above arguments also demonstrate the patentability of independent claim 53. Thus, independent claims 1 and 53 are patentable over Gauthier, Yang, Choudhary, and Eubanks. Dependent claims are allowable at least the same reasons.

E.   Conclusion

In view of above, Applicant respectfully requests the panel withdraw the Examiner's rejections. Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. Please apply any charges not covered, or any credits, to deposit Account 50-0591, Reference No. 02008/092002.

Dated: April 18, 2008   Respectfully submitted,

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